

SECTION 024119
SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.
2. Provide all materials, labor, tools, equipment, transportation, design, supervision, and administration for erection and dismantling of a lined, scaffold-supported trash chute.
3. Erection of temporary weather enclosures to prevent entry of rain and wind into building following removal of existing roof construction.

B. Related Requirements:

1. Section "Scope of Work" for restrictions on use of the premises, Owner-occupancy requirements, and phasing requirements.
2. Section 260100 "Electrical Work General Requirements" for requirements and restrictions concerning demolition of electrical systems and preservation of service to remaining portions of facility.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

- E. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.

1.5 PREINSTALLATION MEETINGS

- A. Pre-demolition Conference: Conduct conference at Project site.
 - 1. Inspect and discuss condition of construction to be selectively demolished.
 - 2. Review structural load limitations of existing structure.
 - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
 - 5. Review areas where existing construction is to remain and requires protection.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For refrigerant recovery technician.
- B. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control and for noise control. Indicate proposed locations and construction of barriers.
- C. Schedule of Selective Demolition Activities: Indicate the following:
 - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
 - 2. Interruption of utility services. Indicate how long utility services will be interrupted.
 - 3. Coordination for shutoff, capping, and continuation of utility services.
 - 4. Installation of debris chute.
 - 5. Use of elevator and stairs.
 - 6. Coordination of Owner's continuing occupancy of portions of existing building.
- D. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

1.7 ACTION SUBMITTALS

- A. Shop Drawings: Submit plans, elevations, sections and details of the following:
 - 1. Debris chute and scaffolding construction, including connection to building and supports on ground.
 - 2. Temporary weather enclosures.
 - 3. Shoring of existing roof framing members.
- B. Calculations: Submit calculations prepared by a Calif-licensed professional engineer substantiating ability of the following to resist required loads:
 - 1. Debris chute scaffolding member sizes and connecting fasteners.
 - 2. Framing of temporary weather enclosures.
 - 3. Roof shoring.
- C. Product Data: Submit for materials used in debris chute and temporary weather enclosure construction.

1.8 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and salvaged.

1.9 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

1.10 FIELD CONDITIONS

- A. Owner will occupy portions of building on floors immediately below selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
 - 1. Before selective demolition, Owner will remove the following items:
 - a. Furnishings and equipment, unless otherwise noted.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

- D. Hazardous Materials: Present in areas to be selectively demolished. A report on the presence of hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.
 - 1. Hazardous material remediation is specified elsewhere in the Contract Documents.
 - 2. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.
- G. Use of Elevators: Elevators shall be used for transport of working personnel only; no debris, construction materials or equipment shall moved via elevators unless specifically approved by Owner.

1.11 COORDINATION

- A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ASSE A10.6 and NFPA 241.
- C. Design: Engineer debris chute & scaffolding support to withstand impact loads from use. Engineer debris chute scaffolding, temporary weather enclosures and roof shoring to withstand dead loads and anticipated external live loads of wind and seismic activity.
 - 1. Design temporary enclosure for the large opening in roof to be removable, allowing for building materials to be delivered into the floor level during construction phase, then replaceable at end of day's work.

2.2 DEBRIS CHUTE

- A. Scaffolding: System of galvanized steel components with bolted connections.
- B. Lining: Wood structural panels.

2.3 TEMPORARY WEATHER ENCLOSURES

- A. Framing: Galvanized steel studs and joists.
- B. Sheathing: Wood structural panels.
- C. Weather Barrier: Self-adhesive or fluid-applied membrane capable of remaining weather-tight against rain, wind and sun exposure for the required length of project schedule.

2.4 ROOF SHORING

- A. Strongbacks and sleepers: Hot-rolled structural steel shapes.
- B. Posts and columns: Steel pipe or HSS shapes.
- C. Bracing: Hot or cold-rolled channels or angles.
- D. Misc. plates or bars.
- E. Connections: Bolted or welded for steel-to-steel; drilled-in expansion anchors for steel to concrete.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been shut-off, disconnected and capped before starting selective demolition operations.
- B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- C. Verify that hazardous materials have been remediated before proceeding with building demolition operations.

3.2 PREPARATION

- A. Refrigerant: Before starting demolition, remove refrigerant from mechanical equipment according to 40 CFR 82 and regulations of authorities having jurisdiction.

3.3 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
 2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.
 - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
 - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
 - d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
 - e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
 - f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
 - g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

3.4 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 4. Protect elevator and dumbwaiter entrances, indicators and controls from damage. Repair or replace any components that are damaged to satisfaction of Owner.
 5. Comply with project requirements for temporary enclosures, dust control, heating, and cooling.
- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or

collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

1. Strengthen or add new supports when required during progress of selective demolition.
- C. Remove temporary barricades and protections where hazards no longer exist.

3.5 DEBRIS CHUTE ERECTION

- A. Setup debris chute in location indicated on drawings extending from ground to the floor level of the work.
- B. Carefully remove the window at indicated location and save for reinstallation at completion of the work. Seal the debris chute to the surrounding opening against weather intrusion and dust/debris escape.
- C. Place roll-off debris container at bottom of chute. Coordinate with Owner to allow space for continued use of loading dock adjacent to debris container.

3.6 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
 5. Maintain fire watch during and for at least 2 hours after flame-cutting operations.
 6. Maintain adequate ventilation when using cutting torches.
 7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 8. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 9. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 10. Dispose of demolished items and materials promptly

- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- C. Removed and Salvaged Items:
 - 1. Clean salvaged items.
 - 2. Pack or crate items after cleaning. Identify contents of containers.
 - 3. Store items in a secure area until delivery to Owner.
 - 4. Transport items to storage area designated by Owner.
 - 5. Protect items from damage during transport and storage.
- D. Removed and Reinstalled Items:
 - 1. Clean and repair items to functional condition adequate for intended reuse.
 - 2. Pack or crate items after cleaning and repairing. Identify contents of containers.
 - 3. Protect items from damage during transport and storage.
 - 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.7 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals using power-driven saw, and then remove concrete between saw cuts.
- B. Concrete Roof Slabs-: Shore up below, saw-cut perimeter of area to be demolished, and then break up and remove.
- C. Metal Roof Deck and Framing: Saw cut opening of indicated size in location indicated for access opening to be used for delivery of building materials in new construction phase. Unbolt and remove indicated steel channel and Z purlins; save and store where directed by Owner for reinstallation in next phase of project.
- D. Roofing: Neatly cut and remove roofing and insulation where indicated to expose structural roof deck for further demolition.

3.8 INSTALLATION OF TEMPORARY WEATHER ENCLOSURES

- A. Install approved temporary weather enclosures at all openings created in exterior of building by demolition operations. Secure to building to withstand wind forces. Seal weather-tight.

3.9 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.
 - 1. Do not allow demolished materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 3. Remove debris from demolition area via debris chute, to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.

3.10 REMOVAL OF TEMPORARY ELEMENTS

- A. Structure Shoring: Coordinate removal of shoring members and fastenings from site with Owner's interior improvement phase schedule when notified that permanent construction is self-supporting.
- B. Disassemble and remove from site the debris chute and scaffolding when no longer needed for removal of construction waste during the Owner's interior improvement phase. Scheduled term for use of debris chute will be as indicated in Contract General Requirements.
- C. Leave temporary weather enclosures in place. Owner will disassemble and dispose of when replaced with permanent construction.

3.11 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119